# Materials Science and Engineering (MR)

## Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Required Courses</strong></td>
<td></td>
<td>18</td>
<td>30</td>
</tr>
<tr>
<td>MSE/NE 409/</td>
<td>Nuclear Materials</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MSE 509/NE 509</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSE 440/540</td>
<td>Processing of Metallic Materials</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MSE 445/545</td>
<td>Ceramic Processing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MSE 455/555</td>
<td>Polymer Technology and Engineering</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MSE 456/556</td>
<td>Composite Materials</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MSE 460/560</td>
<td>Microelectronic Materials</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MSE 465/565</td>
<td>Nanomaterials</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MSE 480/580</td>
<td>Materials Forensics and Degradation</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours 30

This degree program also provides an opportunity for the Directors of Graduate Programs (DGPs) at NC State to recruit rising juniors in their major to their graduate programs. However, permission to pursue an ABM degree program does not guarantee admission to the Graduate School. Admission is contingent on meeting eligibility requirements at the time of entering the graduate program.

## Accelerated Bachelor's/Master's Degree Requirements

### Undergraduate Requirements

The following undergraduate programs meet the undergraduate requirements for the Accelerated Bachelor's / Master's (ABM):


### Double-Counted Courses

After taking 12 credit hours of double-counted courses in the BS degree, only 18 hours remain for completion of either master's degree in the fifth year.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSE/NE 409/</td>
<td>Nuclear Materials</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MSE 509/NE 509</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSE 440/540</td>
<td>Processing of Metallic Materials</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MSE 445/545</td>
<td>Ceramic Processing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MSE 455/555</td>
<td>Polymer Technology and Engineering</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MSE 456/556</td>
<td>Composite Materials</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MSE 460/560</td>
<td>Microelectronic Materials</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MSE 465/565</td>
<td>Nanomaterials</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MSE 480/580</td>
<td>Materials Forensics and Degradation</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

### Faculty

#### Professor

Frederick Kish

#### Assistant Professor

Bharat Gwalani

#### Adjunct Professors

- Harald Ade
- David E. Aspnes
- Charles M. Balik
- Salah M. A. Bedair
- Donald Wayne Brenner
- Jerome J. Cuomo
- Michael David Dickey
- Jan Genzer
- Russell E. Gorga
- Carol K. Hall
- Ola Lars Anders Harrysson
- Ayman I. Hawari
- Douglas Lee Irving
- Albena Ivanisevic
- Jacob L. Jones
- Jesse Jur
Materials Science and Engineering (MR)

Carl C. Koch
Thomas H. LaBean
Harold Henry Lamb
Frances Smith Ligler
James D. Martin
Veena Misra
Korukonda Linga Murty
Jagdish Narayan
Roger Jagdish Narayan
Gregory N. Parsons
Melissa Anne Pasquinelli
Zlatko Sitar
Franky So
Richard J. Spontak
Martin Thuo
Joseph B. Tracy
Daryoosh Vashaee
Orlin Dimitrov Velev
Yaroslava G Yingling
Xiangwu Zhang
Yong Zhu
Aram Amassian
Ashley Carson Brown
Ramon R. Collazo
Rajeev Kumar Gupta
Djamel Kaoumi
Jagannadham Kasichainula
Divine Philip Kumah
Nina Wisinger
Ruijuan Xu
Timothy Joseph Horn
Kaveh Ahadi
Veronica Augustyn
Wenpei Gao
Yin Liu
Srikanth Patala

Ge Yang
Reza A Ghiladi
John F Muth
Claude Lewis Reynolds Jr.
Hans Conrad
Robert F. Davis
Elizabeth Carol Dickey
Nadia El-Masry
John Joseph Hren
Jacqueline Krim
Gerald Lucovsky
Jon-Paul Maria
Khosrow L. Moazed
Ronald O. Scattergood
John S. Strenkowski
Yuntian T. Zhu
Cheryl Cass
Barry Farmer
Charles Richard Guarnieri
James Michael LeBeau
Tania Milkova Paskova
John T. Prater
Justin Schwartz
Victor Zhirnov

Research Professors

Christopher Rock